

Sun et al., Supplementary Figure Legends

Figure S1 Sequence alignment of Rfp1, Rfp2, and RNF4. Colors indicate completely conserved (green), strongly conserved (yellow), or weakly conserved residues (cyan).

Figure S2 List of clones identified in the yeast two-hybrid screen using Rfp1 as bait. Middle column shows the times each clone was identified in the screen. Right column shows the homologues of each clone in mammals and in budding yeast *S. cerevisiae*.

Figure S3 Sequence alignment of the RING finger domains of RNF4 family proteins. Sequences are aligned from the first Cys of the RING domain to the carboxyl terminus in each protein. As in Fig. 1d, DdMIP1b refers to a different version than that reported by Firtel and colleagues (Sobko et al, 2002), presumably a splicing variant, which shows greater similarity to the rest of RNF4 family members at its C-terminus.

Figure S4 Rescue of the $\Delta rfp1\Delta rfp2$ growth defect by episomal vectors containing $rfp1$ ($p[rfp1^+]$) or $rfp2$ ($p[rfp2^+]$) genes. The plasmids were constructed by replacing the *nmt1* promoter in pSLF173 with the genomic fragments containing either the $rfp1^+$ or $rfp2^+$ gene and their respective 5' and 3' non-coding regions.

Figure S5 Morphology of $\Delta slx8$ cells. Left panel: $\Delta slx8$ cell morphology observed by DIC; center panel: field of $\Delta slx8$ cells with DAPI-stained nuclei; right panel: field of wild type cells ($slx8^+$) with DAPI-stained nuclei is shown for comparison.

S1

Rfp1 1 -----MQFNGSNGIDESSESVI**D**LTRSPSPPP
 Rfp2 1 -----MNLHGLELPGRDQR**L**SP**E**VIDLTEDIEDD
 mRNF4 1 MSTRNPQRKRRGGTVNSRQTQKR**T**RETTSTPEVSLET**E**PIELVET**V**GDE**I**VDLTC-----

Rfp1 25 VETSISSTNIIDLDAIPDDSFPS**P**VLS**P**RRR-RMNRRRNERSRNFPSNHL**S**YLED**M**IYL
 Rfp2 30 GAD-V**S**EVTL**L**LD**I**TRIP-----EFQP**R**RR**I**RTS-RNHL**D**ANLSNVPT**I**NSIP**P**SV-----
 mRNF4 57 -----S**L**EPVV**V**V**D**LTHND-----SVV**I**VEER**R**RP**R**RN**G**RRL**R**QDHADSCVVSS**D**DEEL-----

Rfp1 84 GPQVSTRRSSS**S**RRDL**M**GMIA**T**RT**F**EFSSVNSL**S**PSLFQLIVNRMRFD**A**IHP**E**WTNGSDDE
 Rfp2 78 -----TRPPVA**V****G**GI**Y**GA**R**RT**R**NR**S**-----QTQRRTL
 mRNF4 105 -----SRDKDV**V****Y****V****T****T****H**TPRST**K**DDGAT-----

Rfp1 144 YFSNHFEESYDDFTSSLENIKQS**Y****K****P**PG**P**PKSG**G**FTRSFNN**N**DTLM**V****C****P****R****C**QEPLGT**T****S**KSKE
 Rfp2 107 L**E**NGFRNSRKKA**Q**D**S**NSIA**E**RV**S**-----PPP**G**FCYDVPHNN-----IA**A****K****C****G**NE**L**VSD-----E
 mRNF4 127 -----G**P****R****P****S**GT-----V**S****C****P****I****C****M**-DG**Y****S**EIVQN-----

Rfp1 204 K**S**ALWATK**C****G****H****V****Y****C****G****S**CA**K****V****L****K****T****S****K****R****S****Q****S****K****C****L****V****N****D****C****G****R****Y****L****N****T****K****N****A****M****W****E****L****F****Y**
 Rfp2 159 K**K****S****I****F****A****A****K****C****G****H****L****F****C****S****T****C****A****K****E****L****R**-----K**K****T****V****P****C****P****V****Q****H****C****R****K****R****I**-T**K****K****F****I****F****P****L****Y**
 mRNF4 150 G**R****L****I****V****S****T****E****C****G****H****V****F****C****S****Q****C****L****R****D****S****L**-----K**N****A****N****T****C****P****T**-----C**R****K****K****I****N****H****K****R**-Y**H****P****I****Y****I**

S2

Result of two-hybrid screening against Rfp1

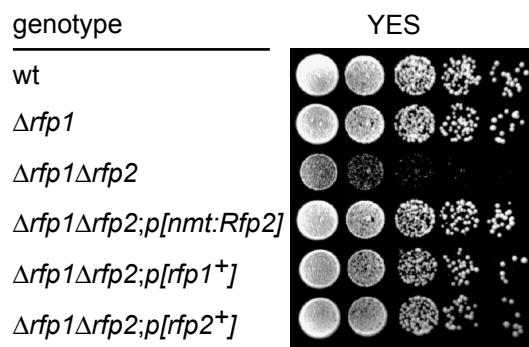
Clone	Times isolated	Homologues in mammals/budding yeast
Pmt3	6	SUMO/Smt3
SPAC227.10	4	prefoldin subunit 2/Gim4
Rad60	3	NIP45/Esc2
Rfp1	2	RNF4/Hex3
Pli1	1	PIAS/Nfi1
Rhp18	1	Rad18/Rad18

S3

Rfp1RING CPRCQE**E**PLGT**S**KSKE-----K**S**ALWA
 Rfp2RING CA**K****C****G****N****E**-----VSDE-----K**K****S****I****F****A**
 Hex3RING C**C****L****C****G****A****E****L****G****V****G****I****P****D****D****F****T****G****I****S****Q****K****D****R****G****V****S****F****E****G****L****V****S****K****Y****K****F****H****C****P****Y****Q****T****L****A****R****P****S****M****L****R****D****L****S****K****R****T****F****I**
 DdMIP1bRING CPIC**F****E**-----DT-----K**P****Y****V**
 CG10981RING CPIC**M****D****S**-----VSK-----R**E****P****V**
 mRNF4RING CPIC**M****D****G****Y****S****E****I****V****Q****N****G**-----R**L****I****V****S**

Rfp1RING TK**C****G****H****V****Y****C****G****S**CA**K****V****L****K****T****S**-----K**R****S****Q****S****K**-----CLVND**C****G****R****Y****L****N****T****K****N****A**
 Rfp2RING AK**C****G****H****L****F****C****S****T****C****A****K****E****L****R**-----K**K****T****V****P**-----CPV**Q****H****C****R****K****R****I****T****K****K****-****F**
 Hex3RING ASC**G****H****A****F****C****G****R****C****F****A****R****I****D****N****A****K****K****K****S****K****M****P****K****K****L****A****Q****L****K****G****S****A****H****D****N****Y****G****P****K****L****C****P****A****D****S****C****K****K****L****I****R****S****R****G**
 DdMIP1bRING TLC**G****H****I****F****C****S****D****C****I****V****N****A****L**-----K**K****K****S**-----CPV-----CNAKLHGKKP
 CG10981RING TK**C****G****H****V****F****C****R****E****C****I****E****T****A****I**-----R**A****T****H****K**-----CPI-----CNKKLTARQ-
 mRNF4RING TEC**G****H****V****F****C****S****Q****C****L****R****D****S****L**-----K**N****A****N****T**-----CPT-----CRKKINHKR-

Rfp1RING MW**E****L****F****Y**
 Rfp2RING I**F****P****L****Y****L**
 Hex3RING L**K****E****V****Y****F**
 DdMIP1bRING Y**H****P****I****Y****I**
 CG10981RING F**F****R****I****Y****L**
 mRNF4RING Y**H****P****I****Y****I**

S4**S5**